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Report of the World Health Organization

Note by the Secretary-General

In accordance with a request of the Statistical Commission at its thirty-third session,** the Secretary-General has the honour to transmit to the Commission the report of the World Health Organization on health statistics. The Commission may wish to review the current activities and future plans in health statistics presented by the World Health Organization.

* E/CN.3/2003/1.
** See *Official Records of the Economic and Social Council, 2001, Supplement No. 4* (E/2001/24), para. 1.

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Report of the World Health Organization on health statistics

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I. Introduction

1. The present report summarizes recent activities undertaken by the World Health Organization (WHO) in relation to the health statistics it reports, building on the summary of the major areas of work in health statistics undertaken by WHO that was submitted to the Statistical Commission in March 2002.

II. Scientific peer review

2. The Director-General of WHO proposed a number of measures to help member States contribute to the WHO assessment of their health systems performance regularly, which the Executive Board of WHO noted with satisfaction in its resolution EB107.R8 in January 2001. The measures included:

(a) To establish a technical consultation process, bringing together personnel and perspectives from member States in different WHO regions, supported jointly by WHO staff at the country, regional and global levels;

(b) To ensure that each member State is consulted on the best data to be used for assessing health system performance and is provided advance information on the indicator values that WHO obtains using those data;

(c) To establish a small advisory group, including some members of the Executive Board of WHO and the Advisory Committee on Health Research, to help monitor WHO support for the assessment of health system performance.

3. In response to that resolution, the Director-General of WHO constituted the Scientific Peer Review Group in October 2001, chaired by Professor Sudhir Anand of Oxford University, to review the framework and methods used to monitor the performance of health systems. Its membership consisted of independent technical experts, academics and policy makers, with representation from all WHO regions. It submitted its final report to the Director-General in May 2002. The report was considered by the Executive Board of WHO in May 2002 and the Director-General's response to the recommendations of the report will be discussed by the Executive Board in January 2003.

4. The Group, after meeting several times and submitting an interim report to the WHO Executive Board in January 2002, endorsed the approach to performance assessment proposed by WHO after a series of technical and regional consultations on the original methods. The review included methods for the measurement of key outcomes (health, inequalities in health, responsiveness, fairness in financial contributions), the performance of health system functions and quantification of the inputs to the health system. It also covered methods used to obtain data, including the World Health Survey. It also made numerous suggestions about how the work could be further developed. As part of that response, the Director-General is establishing a number of advisory committees consisting of outside experts to continue to provide independent technical advice to WHO in key areas related to its health statistics.

5. The report of the Group is available at www.who.int/health-systems-performance. In the interests of transparency, all documents relevant to figures measured and reported by WHO in relation to health system performance

assessment are available on the same web site, including criticisms and debate concerning the WHO approach. It is updated intermittently.

III. Consultations with technical experts and member States

Consultations related to health system outcomes and functions

6. Six expert consultations and one related scientific group have been convened on methods to measure the key outcomes and functions of health systems. Participants were internationally renowned experts in the relevant technical areas. Each consultation debated the methods proposed to measure particular quantities of interest, and made recommendations on their appropriateness and possible improvements, which recommendations were taken into account in the development of the secretariat's proposals and then considered by the Scientific Peer Review Group. The consultations are listed in annex I and full reports are available on the WHO web site at www.who.int/health-systems-performance.

7. In addition, regional consultations were convened on the overall framework and methods used to measure health systems performance in the six WHO regions (see list in annex II). Participants were government officials from member States, technical experts and academics from those member States, and members of WHO regional offices. Reports of those consultations and the list of participants are available at the same web site. The reports were also used to help develop the revised methods proposed to the peer review and were considered by the Scientific Peer Review Group.

Consultation with member States about health statistics

8. WHO interacts with its member States on different types of health statistics on an almost daily basis. For example, there is continual interaction with countries about the data needed to update and expand national health account figures, and many technical programmes receive regular reports from countries on such variables as the incidence of different types of diseases, coverage of some types of interventions (e.g., immunization) and cure rates. WHO works closely with countries to improve the capacity to identify and report outbreaks of specific diseases.

9. In addition, some time before the *World Health Report* is released each year, WHO holds informal consultation with its member States on their health statistics and the data collected by WHO, including the figures prepared for the annex tables (including life expectancy, healthy life expectancy and health expenditures). During that period of consultation, figures are revised, where appropriate, before final publication.

Regional committees and country requests

10. During meetings of the regional committees in 2001, a briefing on the World Health Survey, including the data to be collected, was provided to member States. Plans for the World Health Survey were also discussed. During 2002, many countries requested participation in the first round, commencing late in 2002; 73 countries decided to put the Survey into the field, beginning late in 2002.

IV. Development and dissemination of health statistics

11. WHO has developed a strategy for long-term development of core health indicators to gradually identify essential indicators for health and health system performance, which will include information on risk factors, diseases, interventions and health outcomes. Those indicators are intended to inform health policy and programmes, and will respond to five quality criteria. Indicators will:

(a) Be collected using tools with proven validity;

(b) Provide measures that are comparable between countries, across populations within countries and over time;

(c) Be reported with quantified measures of reliability and statistical measures of uncertainty;

(d) Be reviewed in a cycle of consultation with member States to enable primary data sources that may not have been previously reported or used to be identified, build mutual understanding of the strengths and weaknesses of available data, and ensure broad ownership of the results;

(e) Be characterized by a transparent "data audit trail", with free access to primary data, wherever possible, and explicit reporting of any techniques used to adjust and correct for biases and any other modifications.

12. Many WHO technical programmes have developed monitoring and evaluation frameworks based on shortlists of recommended indicators. Those frameworks define general standards and measurement requirements for 10 to 40 core health indicators, depending on the scope and complexity of the programme considered. Frameworks have now been established for malaria, tuberculosis, epidemic-prone diseases, reproductive health, environmental health, pharmaceuticals, health system performance, non-communicable diseases and some risk factors. Specific scientific groups are constantly reassessing the applicability of those frameworks at the country level and their capacity to generate quality information that can be used and compiled for intelligence purposes.

13. That normative work has provided opportunities to strengthen national health information systems and some of their subsystems. For example, the WHO Department of Communicable Diseases Surveillance and Response has developed an integrated approach to communicable disease surveillance that pools the resources and capacities of surveillance network laboratories, vital registration systems, service reporting and sentinel sites. The WHO Cluster of Non-Communicable Diseases and Mental Health proposes a step-wise approach to the surveillance of risk factors, including, successively, questionnaire-based assessment, physical measurements and biochemical assessments.

14. A clear formulation of core health indicators and data-quality standards, coupled with simplified production mechanisms, has become a cornerstone of most WHO technical programmes, with the purpose of generating comprehensive and meaningful health information at the country level.

15. Data on the millennium development goals health indicators and other health statistics will be reported periodically, in collaboration with other United Nations agencies, in the annex to the *World Health Report*, and will also be disseminated through the WHO country web-based systems. That information, annotated in a way

to make its limitations transparent, will be made accessible to decision makers, media and communities. Those systems will be linked to other sources, where possible, and designed to enable productive use of data at the global, regional and even district levels. Instructions for use of those global information sources will be incorporated into the guidelines and training material for building national capacity.

V. Specific indicators

16. An update of information on specific indicators that have been developed since the WHO report submitted to the Commission in March 2002 is set out below; only new information is provided.

Population health

17. Member States have reported cause-of-death statistics annually to WHO based on vital registration systems for the last 50 years. Data are now received from about 120 member States and are validated in collaboration with countries. Life tables for 191 member States for the year 2000 were published recently.[1] In addition, a set of papers on summary measures of population health, emerging from technical consultations that contributed to the development of the healthy life expectancy metric that is used by WHO, will be published before the end of 2002.[2]

18. A four-year effort to measure and report the burden associated with major risks to health culminated in the publication of the *World Health Report 2002* on that topic, the first time that comparable information has been reported at the global and subregional levels — results were presented for 14 epidemiological subregions. The report not only quantifies the extent of the burden associated with each risk factor but also outlines the costs and effects of selected interventions to reduce that burden. More than 100 outside collaborators were involved in the effort, and all burden estimates were subject to a strict peer review process. A book on the detailed estimates will be published in 2003.

National health accounts

19. The *World Health Report 2002* annex tables expanded the health expenditure figures to report a time series for each country, from 1995-2000. In subsequent years, the most recent five years of data will be reported. That process involves regular interaction with member States and other organizations working in the area, such as the World Bank and the Organisation for Economic Cooperation and Development (OECD). A guide is in the process of being finalized, in collaboration with the World Bank and the United States Agency for International Development (USAID), and with the participation of OECD. Regional and country capacity-building and sensitization workshops have also been held intermittently — for example, a sensitization meeting for policy makers in Central and West African countries will be held at the end of January 2003 in Senegal, following a similar meeting held in Nairobi in June 2002.

Household financial contributions to the health system

20. Following the recommendations of the Scientific Peer Review Group, WHO will report the impact of financial contributions on income distribution and poverty in the income space and on the burden that payments impose on the household. A

new formulation of the fairness of financial contributions index was endorsed by the peer review, and WHO will also report on the proportion of households facing catastrophic expenditure. WHO has intensified its interaction with member States to identify recent household surveys that include expenditure data for that purpose. Much of that work uses data from the living standards measurement surveys supported by the World Bank.

WHO Family of International Classifications (WHO-FIC)

21. A network of WHO-FIC centres has been established to oversee the implementation, maintenance and updating of the WHO family of international classifications. In addition, an advisory committee will provide technical expertise to support WHO in the exercise. The collaborating centres meet annually. The most recent meeting was held in Brisbane, Australia, from 14 to 19 October 2002. Five committees have been established to advise WHO and guide work on the development, implementation, maintenance and use of WHO-FIC: the Family Development Committee; the Implementation Committee and its Training and Credentialing Subgroup; the Mortality Reference Group; the Update Reference Committee; and the Electronic Tools Committee. The full report of the 2002 meeting is available at http://www.who.int/whosis/icd10/collabor.htm.

22. A WHO conference on health and disability was also held in Trieste, Italy, from 17 to 20 April 2002. Round-table discussions were held on the themes of the health and wealth of nations, and disability and health. In addition, sessions on disability statistics, the International Classification of Functioning, Disability and Health (ICF) in health information systems, ICF in clinical practice and ICF in surveys were also held. The meeting emphasized the need for a common framework for describing and measuring health and disability for many different purposes. A full report of the meeting is available at http://www.who.int/classifications/icf.

VI. World Health Survey

23. The Scientific Peer Review Group reviewed the proposal for a World Health Survey and the results of the multi-country survey study 2000-2001, and recommended that the Survey proceed. The purpose is not to supplant routine information systems but to complement them. WHO is still committed to helping countries to develop their routine health information systems and their vital registration systems in particular.

24. The Survey has been launched in 73 countries in which Governments have requested or agreed to participation, across all WHO regions. A detailed report on the Survey will appear as part of the United Nations Statistics Division report on an expert group meeting held in New York from 8 to 11 October 2002 on the theme "An analysis of operating characteristics of surveys in developing and transition countries: survey costs, design effects and non-sampling errors". A brief progress report follows.

25. Extensive preparatory work involved a systematic review of instruments to measure health and health-related outcomes, the acceptance of a common framework for those measurements and the critical review by the Scientific Peer Review Group. The instrument was developed in consultation with technical groups within and outside WHO, and has undergone rigorous testing for cultural

applicability and to establish its psychometric properties in local languages in the multi-country survey study undertaken in 61 countries.[3] The revised instrument was then pre-tested in 12 countries, leading to the final version of the WHS instrument for the current round.

26. As reported in March 2002, the instrument has been developed in a modular manner and consists of a household questionnaire and an individual questionnaire. The household questionnaire seeks demographic information and information on the availability of health insurance, permanent income and health expenditure. In addition, questions are asked about the coverage of selected interventions and the presence of disabling health conditions within the household of the appropriate household informant. The individual questionnaire, administered to a probabilistically selected respondent from within the household, asks about health status, valuation of health states, mortality in terms of birth history and sibling survivorship, risk factors, coverage of major health interventions, responsiveness of the health system, the relative importance of health system goals and social capital.

27. WHO has established an elaborate process for quality control and technical support to countries, involving internal and external experts. Regional training workshops have been held to train all investigators in the methodology of the Survey and to emphasize the importance of the quality-assurance protocol that has been put in place. Training materials, such as an interactive CD-ROM with video clips, have been made available to all sites. A panel of technical advisers is assisting WHO in supporting sites for Survey design, implementation, analysis and subsequent report writing. Workshops in data analysis will be held once all the data has been collected and national reports will be prepared to disseminate the results.

28. In addition, positioning devices are being used to geo-code the locations of surveys, beginning in 18 African countries, partly as a means of quality control and partly for subsequent analysis so that the location of respondents can be mapped against the availability of health services, for example. Respondent confidentiality is maintained at all times.

29. The information collected by the Survey will for the first time provide truly cross-population comparable data with regard to various health and health-related outcomes in representative populations worldwide. The level and distribution of those parameters, linked to data from geographical information systems, will provide a powerful information base for a comprehensive analysis of equities in health, and will serve as important inputs for poverty and health policy development and for the poverty reduction strategy papers of member States.

30. The Survey will build on regional networks, such as the Programma de Mejoramiento de las Encuestas y la Medición de las Condiciones de Vida (MECOVI) (see below), and is holding discussions with USAID about how best to interact with the Demographic and Health Surveys programme in December 2002. Partnerships are being established with those and other networks to develop collaborations and complementarities in the measurement of health and health-related indicators. All instruments, protocols and background information for the Survey can be accessed at http://www.who.int/whs.

Regional initiatives and WHS

31. The MECOVI programme in the Americas and the Caribbean region was established in 1996 as a cooperative effort between the Inter-American Development Bank, the World Bank and the Economic Commission for Latin America and the Caribbean. The Regional Office for the Americas of WHO (Pan American Health Organization) and the United Nations Development Programme have been granted associate member status. Its main objective is to improve the data from household surveys in terms of their quality, timeliness, accessibility and usefulness. WHO is actively partnering with the initiative in the region to see how the World Health Survey can be linked to it in order to avoid duplication and synergize efforts to support member States and build capacity for the design, implementation and analysis of health and health-related surveys.

VII. Strengthening country capacity

32. The WHO strategy for improving the health statistics of its member States at the national and lower levels is to:

(a) Support countries in making better use of available data;

(b) Address data gaps by developing a mechanism for providing key information required by decision makers that is not routinely collected, in a way that complements the activities of routine health information systems;

(c) Strengthen incentives for countries to generate, use and report health information.

That strategy is part of WHO efforts to strengthen national capacity and facilitate cross-country and cross-region networks, as described below.

Strengthening national capacity

33. The strengthening of national capacity in health policy and systems assessment and development (including for producing, analysing and utilizing health statistics) is being addressed in several ways. One is through an expanding programme of workshops and seminars at the global, regional or country level, as well as more intense work with member States that request such collaboration. To allow maximum flexibility, all workshops and seminars are designed in modular format.

34. For example, two new training courses, each lasting a week, have been developed — one on poverty and one on health-system performance assessment. They were held for the first time in October 2002, with approximately 70 participants in each course from 59 different countries in all WHO regions. Those new courses complemented the modules on the burden of disease and cost-effectiveness analysis that have been conducted jointly with Harvard University for more than 10 years. Those modules each attracted 60 participants, again from all WHO regions.

35. A training module on surveys was held for the first time in November 2001 and has been modified to be repeated early in 2003. That workshop will focus on quality control for the World Health Survey.

36. During 2002, WHO has already worked with technical teams from selected countries to analyse the data collected as part of the 2000-2001 multi-country survey study undertaken in 63 of its member States. Some of those meetings were held in Geneva and some in the requesting countries. Topics included health inequality, health levels, fairness of financial contributions and responsiveness. They will continue in 2003, as requested, and a subregional workshop on burden of disease has been requested by the Gulf States for early 2003.

37. Technical units in WHO also continue to work with member States, as requested, to improve capacity related to the collection and use of routine information on particular diseases, such as tuberculosis, HIV/AIDS and malaria.

38. Another way to strengthen national capacities is clearly to undertake joint analytic work — whether on data or policy options. Increasing interest in performance assessment as a tool for stewardship in decentralized systems has led WHO to collaborate with Indonesia, Mexico, Spain and others to apply WHO framework at the subnational level.

39. Other strategies are planned within the frame of the country focus initiative to build WHO staff capacity in the area of health systems, through increased orientation of staff from intervention — based programmes to health-systems issues; increased systematic support to existing health systems staff; and the recruitment of additional health system specialists for country and regional office placement. WHO headquarters will also provide selected direct technical support to countries, in cooperation with regional and country offices.

Facilitation of cross-country and cross-region networks

40. Facilitation of cross-country and cross-region networks of individuals and institutions that can support assessment, policy analysis and development is needed. WHO regional offices already support a range of networks, and such global networks as the enhancing health system performance initiative could be more systematically developed into a network that brings together those that generate and those that use evidence. WHO is also supporting regional networks on national health accounts and the formation of country teams. About 70 countries currently have full national health accounts. Government budgets and household expenditures on health allow the construction of sources of finance for 191 countries to date.

VIII. Conclusions

41. WHO has implemented an unprecedented review of the techniques that it uses to develop health statistics related to key outcomes, functions and inputs to the health system, including technical and regional consultations and a formal scientific peer review. It continues to work with countries, when requested, to strengthen their capacity to collect and analyse their own data. Technical units in many areas routinely work with countries to strengthen the methods used to measure and report indicators related to specific diseases or conditions, including disease surveillance. Expert committees and partnerships with other organizations and agencies (e.g., Roll Back Malaria, Stop TB) play an important role in that process. As part of its continued commitment to ensure that health statistics are reliable, valid and comparable and have a clear audit trail, WHO is in the process of establishing additional advisory committees of outside experts to provide continued expert

advice on its activities relating to health system outcomes, processes and inputs, and to strengthen its ties with other agencies working in this area.

Notes

[1] A. D. Lopez, O. B. Ahmad, M. Guillot, B. D. Ferguson, J. A. Salomon, C. J. L. Murray and K. H. Hill, *World Mortality in 2000: Life Tables in 191 Countries* (Geneva, World Health Organization, 2002).

[2] *Summary Measures of Population Health: Concepts, Ethics, Measurement and Application* (WHO, forthcoming).

[3] See T. B. Ustun et al., *WHO Multi-Country Survey Study on Health and Responsiveness 2000-2001*, EIP Discussion Paper, No. 37 (WHO, 2001).

Annex I

Meetings of technical review groups*

1. Measurement of efficiency of health systems, New Orleans, January 2001.
2. Concepts and methods for measuring the responsiveness of health systems, Geneva, September 2001.
3. Stewardship, Geneva, September 2001.
4. Effective coverage in health systems, Rio de Janeiro, September 2001.
5. Statistical strategies for cross-population comparability, Boston, October 2001.
6. Fairness of financial contribution, Geneva, October 2001.
7. Health inequalities, Geneva, November 2001.
8. Classification and measurement of health:
   - Summary measures of population health, Marrakech, Morocco, December 1999.
   - First preparatory working group meeting on measuring health status, Geneva, 2 and 3 August 2000.
   - Second preparatory working group meeting on measuring health status, Geneva, 4 and 5 September 2000.
   - Meeting of a committee of experts on measurement and classification for health, Geneva, 11-12 September 2000.
   - Joint ECE/WHO meeting on measuring health status, Ottawa, 23-25 October 2000.

* Full reports are available at www.who.int/health-systems-performance.

Annex II

Regional consultations*

1. WHO African region: regional consultative meeting on health systems performance assessment, Harare, 18-20 July 2001.
2. WHO region of the Americas: regional consultation of the Americas on health systems performance assessment, Washington, D.C., 8-10 May 2001.
3. WHO South-East Asia region: regional consultation and technical workshop on health systems performance assessment, New Delhi, 18-21 June 2001
4. WHO European region: European consultation on health systems performance assessment, Copenhagen, 3 and 4 September 2001.
5. WHO Eastern Mediterranean region: regional consultation on the conceptual framework for health systems performance assessment, Ain Saadeh, Lebanon, 9-11 July 2001.
6. WHO Western Pacific region: regional consultation on health systems performance assessment, Manila, 3-5 July 2001.

* Full reports are available at www.who.int/health-systems-performance.